

### **AMENDMENTS TO THE SPECIFICATION**

Please amend the Specification by replacing the paragraphs identified below with respect to the paragraph numbering found in U.S. Patent Application Publication US 2005/0223722A1, i.e., this application, as published.

*Please replace paragraph [0004] with the following replacement paragraph:*

[0004] However, the HC cooling medium has a characteristic is characteristically easily soluble into the refrigeration machine oil, for example, a mineral oil, compared in contrast to the solubility of an HFC cooling medium and other refrigerants in the machine oil. Therefore, a problem arises that the amount of the refrigerant circulating in the refrigerating cycle decreases. In particular, after turning on power when much refrigerant is has been dissolved in the refrigeration machine oil, there is the possibility of the reduction of the that cooling performance will be reduced.

*Please replace the heading immediately after paragraph [0019], and the paragraphs indicated below with the following new heading and replacement paragraphs:*

#### **DISCLOSURE OF INVENTION SUMMARY**

[0020] The invention stated in claim 1 One embodiment of this disclosure is characterized in that it has in a body of a refrigerator a refrigerating cycle sequentially connecting a compressor for varying the capacity, a condenser, a drawing mechanism, and an evaporator with a hydrocarbon cooling medium used as a refrigerant, and drives the compressor by high speed rotation for a predetermined period of time after turning on power.

[0021] According to the present invention one aspect of an embodiment, the atmospheric temperature is low and the pressure in the compressor is high, so that even if the amount of the refrigerant dissolved into the refrigeration machine oil is increased after turning on power, by high speed rotation of the compressor, the amount of heat of the motor of the compressor is increased, and the temperature inside the compressor is increased, and the pressure of the refrigerating cycle is made uniform quickly, and the pressure inside the compressor is reduced,

thus the amount of the dissolved refrigerant can be reduced and the start-up of the initial cooling performance can be improved.

[0023] The invention stated in claim 2Another aspect of an embodiment is characterized in that it has in a body of a refrigerator a refrigerating cycle sequentially connecting a compressor, a condenser, a drawing mechanism, and an evaporator with a hydrocarbon cooling medium used as a refrigerant, and a cooling fan for radiating heat from the compressor or the condenser, and keeps the cooling fan stopped for a predetermined period of time after turning on power.

[0024] According to the present invention this disclosure, by keeping the fan stopped, the temperature of the compressor is increased quickly and the temperature inside the compressor can be increased quickly after turning on power, so that the separation of the dissolved refrigerant from the refrigeration machine oil can be promoted. In this case, when the air temperature and the temperature of the compressor and others are low in winter, the rise of the temperature of the compressor can be promoted particularly effectively.

[0025] The invention stated in claim 3Another aspect of an embodiment is characterized in that it has in a body of a refrigerator a refrigerating cycle sequentially connecting a compressor, a condenser, a drawing mechanism, and an evaporator, installing a selection valve on the outlet side of the condenser, arranging a bypass pipe for interconnecting the selection valve and a suction side of the compressor with a hydrocarbon cooling medium used as a refrigerant, and lets the refrigerant discharged from the condenser flow on the suction side of the compressor by operating the selection valve via the selection valve and the bypass pipe for a predetermined period of time after turning on power.

[0026] According to the present invention this disclosure, a high-temperature gas cooling medium discharged from the compressor is sucked into the compressor again, thus the temperatures of the compressor and the refrigeration machine oil can be increased quickly, so that the separation of the dissolved refrigerant in the refrigeration machine oil can be promoted after turning on power.

[0027] The invention stated in claim 4Another aspect of an embodiment is characterized in that it has in a body of a refrigerator a refrigerating cycle sequentially connecting a compressor, a

condenser, a drawing mechanism, and an evaporator, installing an on-off valve on the outlet side of the condenser with a hydrocarbon cooling medium used as a refrigerant, and keeps the on-off valve in a closed state for a predetermined period of time after turning on power.

[0028] According to the present invention this disclosure, the on-off valve is kept in the closed state, so that as the compressor discharges the refrigerant, the pressure inside the compressor is extremely reduced. Thus the amount of the refrigerant dissolved in the refrigeration machine oil can be reduced for a short period.

[0029] The invention stated in claim 5 An aspect of an embodiment is characterized in that it has in a body of a refrigerator a refrigerating cycle sequentially connecting a compressor for varying the capacity by controlling a DC brushless motor by power, a condenser, a drawing mechanism, and an evaporator with a hydrocarbon cooling medium used as a refrigerant, and supplies power only to the two phases of the DC brushless motor of the compressor for a predetermined period of time after turning on power, thereby keeping the DC brushless motor away from rotation.

[0030] According to the present invention this disclosure, the power is supplied only between the two phases without driving the motor of the compressor, so that the temperature of the motor rises by the resistance of the winding so as to increase the temperature inside the compressor as a heater. Thus the separation of the dissolved refrigerant in the refrigeration machine oil can be promoted after turning on power.

[0032] The invention stated in claim 6 An aspect of an embodiment is characterized in that it has a refrigerating cycle sequentially connecting a compressor, a condenser, a drawing mechanism, an evaporator, and an accumulator, an inlet temperature sensor and an outlet temperature sensor for detecting the temperatures of the inlet and outlet of the evaporator, and a cooling fan for cooling the compressor, and when a difference between the temperature detected by the inlet temperature sensor and the temperature detected by the outlet temperature sensor becomes a predetermined value or more, the cooling fan is stopped.

[0033] According to the present invention this disclosure, the cooling fan can be controlled not to operate when the refrigerant is in a sleeping state, so that the compressor and the

condenser are not overcooled and the defective cooling due to the sleeping of the refrigerant can be prevented.

[0034] The invention stated in claim 7 An aspect of an embodiment is characterized in that it has a refrigerating cycle sequentially connecting a compressor, a condenser, a drawing mechanism, an evaporator, and an accumulator, an inlet temperature sensor and an outlet temperature sensor for detecting the temperatures of the inlet and the outlet of the evaporator, an air temperature sensor for detecting an air temperature, and a cooling fan for cooling the compressor which is controlled so as to be driven when at least the temperature detected by the air temperature sensor becomes a preset temperature or more, and when the difference between the temperature detected by the inlet temperature sensor and the temperature detected by the outlet temperature sensor becomes a predetermined value or more, the preset temperature is changed to a higher value.

[0035] According to the present invention this disclosure, when the air temperature is high, wherein there are few refrigerant sleeping phenomena generated, even if it is judged that the refrigerant is in a sleeping state, the cooling fan can perform the normal running. Therefore, the compressor and the condenser can be effectively cooled and the cooling capacity can be improved.

[0037] The invention stated in claim 8 An aspect of an embodiment is characterized in that it has a refrigerating cycle sequentially connecting a compressor, a condenser, a drawing mechanism, an evaporator, and an accumulator, an air temperature sensor for detecting an air temperature, and a cooling fan for cooling the compressor which is controlled so as to be driven when at least the temperature detected by the air temperature sensor becomes a preset temperature or more, and the air temperature sensor is arranged in the neighborhood of a machine room.

[0038] According to the present invention this disclosure, even if a difference is generated between the temperatures of the upper part and the lower part of the room, an almost the same temperature as that inside the machine room can be detected. Therefore, the reliability of the cooling fan control by the air temperature sensor can be improved, and the defective cooling due to the sleeping of the refrigerant can be prevented.

[0039] The invention stated in claim 9 An aspect of an embodiment is characterized in that a combustible cooling medium is used as a refrigerant of the refrigerating cycle, and for the combustible cooling medium to be charged in a small amount, the defective cooling due to the sleeping of the refrigerant can be prevented more effectively.